DOCUMENT RESUME

ED 075 927 EA 005 146

AUTHOR Wohlford, Gerald H.
TITLE Derivation of Goal Statements and Their Impact upon Educational Evaluation.
PUB DATE Dec 72
NOTE 12p.; Paper presented at American Educational Research Association Annual Meeting (58th, New Orleans, Louisiana, February 26 - March 1, 1973)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Deductive Methods; *Educational Objectives; *Educational Programs; *Evaluation Criteria; *Evaluation Methods; Formative Evaluation; Inductive Methods; *Program Evaluation; Speeches; Standardized Tests

ABSTRACT

It is axiomatic that an evaluation demands a statement of goal, for without a goal there can be no judgment of progress or success. Goal statements spring from two major sources: experience or theory. One source has its foundation in the present. The other has its genesis in the envisioned future. The former is generally a comparison with the present. The latter is a comparison to a position on a theoretical continuum. In this paper, the two bases upon which goal statements are formulated are explored. The advantages, disadvantages, and implications in relation to findings of each type are discussed. (Author)

FILMED FROM BEST AVAILABLE COPY

MAY 10 1973

ED 075927

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

EA

DERIVATION OF GOAL STATEMENTS AND THEIR IMPACT UPON EDUCATIONAL EVALUATION

Gerald H. Wohlferd

EA 005 146

December 1972

AERA 1973 New Orleans

DERIVATION OF GOAL STATEMENTS AND THEIR IMPACT UPON EDUCATIONAL EVALUATION

Introduction

Evaluation of education is becoming increasingly more popular with the public. Where once evaluation of schools was in terms of total expenditure, emphasis has shifted to children. No longer are parents placated by assurances from administrators and teachers that the schools are doing all that is humanly possible for their children. Instead, parents want to know what the schools are trying to accomplish, with and for the students. Parents are now sophisticated enough to know that in order to form a value judgement (evaluate), there must be some ideal, standard or goal to which the present level of learning can be compared.[1] Thus, they are requesting that educators state their goals. However, very seldom do both educators and parents realize that goal statements can stem from different constructs. Nor do they realize that the genesis of the goal statement affects the inferences that can be drawn from the evaluation.

Types of Goal Statements

Goal statements can spring from several sources. Marshall[2] found environment or circumstances on the one hand, and someone's personal opinion on the other to be major elements in construction of goal statements. The science of logic also offers alternative ways to arrive at the truth. Its two major divisions--inductive and deductive reasoning--resemble somewhat Marshall's two elements. Crumley[3] enlarged upon logical methods by describing inductive reasoning as, "beginning with observations, ascend to laws that explain the facts," and deductive reasoning as, "descend from principles to particular truths."

In the discussion to follow, goal statements will be a meld of the above definitions. One type of goal statement, inductive, will be called "upward." The other, deductive, will be referred to as "downward." Evaluation based upon upward goal statements entails comparison to what is or has been found to be. Evaluation based upon downward derived goals involves comparison to what is hoped to be. Upward evaluation travels from the known to new understandings in the unknown. Downward evaluation starts with theoretical premises in the unknown and seeks for understandings in the known. Some illustrations may help to clarify the boundaries of the foregoing definitions.

Illustrations of Upward Goal Statements

Upward evaluation is the most simple and most often attempted approach to evaluation. It is primarily descriptive. It measures and compares against the situation that exists at present. Upward goal statements include such as:

-- The reading achievement of fourth grade pupils in school A will be comparable to the median score on a given standardized test.

-- The self concept of an underpriviliged pupil group will be raised during the school year.

Often routine testing, such as yearly achievement testing, is conducted with no apparent purpose. The tacet objective, however, is to compare the present scores with those of last year. The goal statement or rationale for conducting the testing really is to determine if a goal such as below has been reached.

-- Children of X school district will achieve at the same level, or at a higher level (heaven forbid they would achieve lower), than last years scores.

It will be noted that in the foregoing illustrations, comparison is made to some predetermined norm. Thus, upward evaluation often involves comparison to a measure of central tendency such as an average, median or mean score. Closeness of the match is usually expressed in terms of standard deviations.

Illustrations of Downward Goal Statements

Downward goals are most often stated as broad generalities. They may be characterized by statements such as:

-- Each student shall have a basic understanding of the operation of our form of government.

-- Each student shall be able to read and comprehend the local newspaper.

-- Each student shall have a command of arithmetic.

The above goal statements propose that all students shall reach a stated goal. Omitted, however, are the time the goal shall be reached, and the several steps thru which necessary knowledge is to be grasped so the main goal may be reached. Sub-goals are derived from such broad goals and assigned to grade levels or age groups according to sequential necessity, theoretical need for use of information by children, ability of children to learn and use information, or combinations of these.

Examples of sub-goals of the first illustration might be:

-- By the end of the fourth grade (five years in school) children shall have enough understanding of Roberts Rules of Order to allow their participation in student government.

-- By the end of the eleventh grade (12 years in school) each child shall have studied the major types of government in theory and in practice.

A further subclassification might be:

-- Knowledge of committee functions and structure shall include titles of officers, duties of officers, order of business, entering and voting on motions, and adjournment.

Thus, evaluation of downward objectives is accomplished by comparing actual results to the goal statements (sub-goals or objectives). Quality is expressed in terms of the percent of pupils reaching not only specific sub-goals, but also the percent reaching the final objective.

Goal Statements vs. Procedures

In the above discussion and illustrations of goal statements the methods employed to reach the goals have been carefully avoided. Evaluations designed to determine the effectiveness of educational methods or procedures include, either expressed or inferred, educational goal statements. Further, evaluations of methods must test against a common product goal no matter what teaching process is used. For example, if one were to evaluate the effectiveness of teaching reading by the use of phonics, opposed to the look-and-say method, the common goal, though unstated, is to teach understanding and word recognition to the same level as accomplished by one or the other method. Thus, since evaluation of teaching processes also includes product objectives or goals, process evaluation will not be discussed further.

Deficiencies of Upward Evaluation

There are several deficiencies inherent in either upward or downward evaluation. Upward evaluation tends to view the present objectives of education as exemplary. It is not unusual for upward evaluation to be conducted

for years, such as through standardized achievement tests, without questioning the goals inherent in the tests. Unfortunately, in such circumstances any measure which exceeds present values are "good" and any values less are "poor."

Even more dangerous is the self-fulfilling prophesy that may result from upward evaluation. Tests are very often constructed to measure the present situation. Standardized tests are measures of the present. Evaluation using standardized tests measures the effectiveness of a program to reproduce the present. Those programs which are designed to produce knowledge goals different from those tested by the particular battery, will yield poor test scores. Those programs designed to produce goals similar to those of the test will yield good test scores. Good programs, as defined by good test scores, would be continued and would perpetuate the present situation. Poor programs, that is those producing children who score low on the test, will tend to be discontinued. Thus, upward evaluation will tend to block change unless great care is taken to identify and discount those portions of the test which are unharmonious to the objectives of the school program.

Upward objectives have one other detraction. Since they tend to be generated at the lower administrative levels, they may treat each subject area within a given grade as a discrete unit. This can lead to a lack of continuity between grade levels, or it may lead to a discordant skill demand across subject areas. In the first instance a subject may be taught as though all children involved have already accrued the necessary prerequisite skills, even though in fact they have not had the opportunity. Though flagrant disjunctions, such as teaching transcription without first having

taught typing, seldom occur, teachers have been known to teach from a text book without first determining if the content is sequential with previous courses.

Not quite as frustrating to the children, but certainly more wasteful of their time are those situations which are the reverse of the above. It is not unusual for course content to be duplicated. Though duplication may lead to a deeper understanding for some children, or help the slow learner to catch up, on the whole duplication tends to turn the children off.

Even more disturbing to students are those situations where a higher level of skill in a parallel but crucial skill is demanded than has been developed. It is not uncommon for a text book to be used whose language level is higher than that of the grade in which it is used. Though disparities such as above are not automatic in schools where upward objectives are the guiding principles, they are more common therein.

Deficiencies in Downward Evaluation

Downward evaluation, too, has its problems. Downward objectives are generally couched in broad terms, such as, "Each child shall learn to be a good citizen." Evaluating the effectiveness of a school in teaching such a goal is difficult at best.

In the first place the objective can often be measured only through observing the actions of each child. Conducting a detailed observation, recording the observations, analyzing the records and reporting the results of the analyses would be extremely costly and time consuming. Too, the effectiveness of the school in teaching an objective may only be measurable after the child has left school. Success is assumed if sub-objectives, which

are measurable during the child's tenure in school, are shown to have been learned. Knowledge when certified by success upon a school test, is accepted as a surrogate for untestable civic actions after graduation. Unfortunately, knowledge of a subject area does not in itself assure application to adult living. Thus, most downward objectives are often not directly measured.

To state an overarching objective in a clear understandable manner is difficult in itself. To specify child-oriented learning units which lead to the objective, but which at the same time, lend themselves to measurement, is an even more difficult task. Thus, downward goals are seldom expressed in measurable terms.

While an upward objective assumes that which exists to be good, a downward objective assumes that which is posited to be a good objective. While the former has support from historic acceptance, the latter is not necessarily supported in like manner. Indeed, downward objectives are quite susceptible to fadism. For example, previous to Sputnik, American educators held that a broad sampling of the arts was a major educational objective. The Russian space capsule caused the American public to demand the production of physicists, aerospace engineers, and other types of scientists. The arts fell from grace as an education goal to be replaced by the natural sciences. Within the last decade the pendulum has swung back to emphasis upon the arts. Shifts in objectives, as illustrated above, are a result of different opinions over time. They depict how easily downward objectives can be influenced.

Also, downward objectives may be offered as panaceas for the ills of society. The present emphasis upon the teaching of reading, which is promulgated under the slogan, "The Right To Read," seems to promise release

from poverty, unemployment, and racial discrimination. The eagerness to follow the latest catchword can lead in turn to de-emphasis of other equally lauditory goals, to the detriment of the society.

Further, a downward objective may be theoretically plausible, but practically indesirable. When the New York State Regents advocated the teaching of sex education to public school children, many sarconic as well as shocked eyebrows were raised. It wasn't until the specifics of course content were publicized that the too broadly stated objective was accepted by parents.

Proponents of new math theorized that math education in the past had in part suffered from a lack of concept development. Therefore, concepts were taught at an early age. Piaget would have sympathized with parents of students who were confused by sets. Today, the teaching of set theory in the early elementary grades is being de-emphasized.

Downward objectives have several other shortcomings. Because downward objectives may result in new statements of sub-goals for which there are no normative measures to which reference can be made, new norms must be established. The construction and verification of new norms may take several years to accomplish. Meanwhile, education would take place without evaluative guidance. Individual instructional programs are a case in point. Administrators and teachers, alike, of individualized instruction programs were for years unable to ascertain whether or not a child was progressing properly through the sequenced sub-goals.

Advantages of Upward Evaluation

The foregoing sections on deficiencies of upward and downward evaluation may give the impression that both methods lack any redeeming qualities. Such is not the case. Upwardly derived goals, because of their base in the present, usually have been tested many times. Therefore, baseline data are available along with information on how the data were obtained. Collection of fresh data is often routine. Data manipulation through tried and true statistical techniques are often available through routine electronic data processing hard and soft ware. Normative scales are readily available. Thus, evaluation is expedited both in terms of ease of data collection, and speed with which evaluation comparisons and calculations can be accomplished.

Advantages of Downward Evaluation

Downwardly derived goal statements have unique benefits, too. Downward goals start from a principle or concept. Intermediary sub-goals are constructed to lead to the final objective. The process of breaking a goal into sub-goals, though agonizingly difficult, frees one from preconceptions, leads to new insights, and invites inspiration. New sub-goals, new emphases, or re-sequencing of old sub-goals are likely. Not only can changes be more easily made but evaluation may more closely follow the suggestions which arise from research studies.

Conclusion

Downward objectives may with time metamorphose into upward evaluation. Such a change may occur when subclassifications of an educational objective are acknowledged to be in themselves discrete educational objectives. The

teaching of the multiplication tables may degenerate into rote learning of combinations with no understanding of number relationships, no tie-in to everyday living, or no connection with past or future arithmetic or mathematical functions.

Upward objectives may also be combined into a downward objective. Further, each form may exist at the same time.

It is important for the evaluator to recognize the type with which he is dealing. Thereby, he may avoid or at least acknowledge the disadvantages inherent in either method, and may capitalize upon their advantages.

BIBLIOGRAPHY

1. Provus, M. "Evaluation in Research," Educational Technology, Vol. 10, pp. 50-54. August 1970.

2. Marshall, M.S. "Analyzing Evaluation," Educational Forum, Vol. 35, pp. 487-490. May 1971.

3. Crumley, Thomas. Logic: Deductive and Inductive, The Macmillan Co., N.Y., 1927, p. 28.